Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-14 (Cancelled)

15. (Currently amended) An arbitrative apparatus of access request arbitration, comprising:

a plurality of access request selectors, ~~wherein~~ each [[one]] of the plurality of access request selectors receiving a plurality of access requests ~~respectively~~; and

an ownership selector, coupled to the plurality of access request selectors, wherein when an access request is being executed, an asking point out signal is sent out to ask for pointing out [[the]] a position of a next access request;

a specified ~~its own~~ priority level, [[and each]] wherein the access request selectors each ~~respectively selects~~ select one of the access requests having the specified priority level ~~grouped to respected priority level from the plurality of access requests~~, and wherein said ownership selector receives outputs of ~~the plurality of access requests respectively and arranges the plurality of access requests which are selected by~~ the plurality of access request selectors and arranges the outputs into a priority

queue;

wherein the ownership selector receives an access request having a priority level lower than the specified priority level, such that the access request having the priority level lower than the specified priority level obtains an access after all the access requests having the specified priority level have been executed at least once.

16. (Currently amended) [[As the]] The arbitrative apparatus of claim 15, further comprising:

a priority setting register coupled to the plurality of access request selectors for setting request numbers of access requests having ~~that belong to~~ said specified priority level.

17. (Currently amended) [[As the]] The arbitrative apparatus of claim 16, further comprising:

an ownership multiplexer[[,]] for finding the corresponding request number of the access request from the priority setting register according to the position [[of]] in said priority queue.

18. (Currently amended) [[As the]] The arbitrative apparatus of claim 15, wherein said ownership selector further comprises a next ownership selector unit[[,]] for pointing out the position of the next access request when receiving said asking point out signal.

19. (Currently amended) [[As the]] The arbitrative apparatus of claim 15, further comprising:

an OR gate with multi-inputs coupled to receive outputs of the ~~between the plurality of~~ access request selectors having the priority level lower than the specified priority level, ~~and said ownership selector and an output coupled to the ownership selector of one higher priority level, estimating whether there any access request is asked of this priority level, if there is, then arranging the access request into~~ an output of the OR gate being inputted to the last position of the priority queue of the ownership selector having the specified ~~one higher~~ priority level.

20. (Currently amended) [[As the]] The arbitrative apparatus of claim 15, further comprising:

a 2-input AND gate, in which one input is coupled to said ownership selector[[,]] ~~estimating~~ to estimate whether [[if]] said asking point out signal is sent, another input is coupled to receive an [[a]] estimation signal[[,]] ~~estimating if~~ to estimate whether the next access request is at the last position of the priority queue, and an output is coupled to the ownership selector having the priority level lower than the specified priority level ~~of one lower priority level~~, wherein when both the inputs are true, then ~~pointing out~~ the next access request having the priority level lower than the specified priority level is pointed out ~~of the one lower priority level~~.

21. (Currently amended) [[As the]] The arbitrative

apparatus of claim 15, wherein at least one said arbitrative apparatus with different priority level can be combined as an arbitrative mechanism wherein said arbitrative mechanism can be an arbiter.

22. (Currently amended) An arbiter of access request arbitration, comprising:

a plurality of arbitrative apparatus, each one ~~has~~ having a ~~its own~~ different priority level;

wherein each one of the arbitrative apparatus with different priority level ~~at least~~ comprises:

a plurality of access request selectors, ~~wherein~~ each [[one]] of the plurality of access request selectors receiving a plurality of access requests ~~respectively~~; and

an ownership selector, coupled to the plurality of access request selectors, wherein when an access request is being executed, an asking point out signal is sent out to ask for pointing out [[the]] a position of a next access request;

wherein [[each]] the access request selectors each ~~respectively selects~~ select one of the access requests having same priority level ~~grouped to the priority level from the plurality of access requests~~, and wherein said ownership selector receives outputs of ~~the plurality of access requests respectively and arranges the plurality of access requests which are selected by~~ the plurality of access request selectors and arranges the outputs into a

priority queue;

wherein the ownership selector receives an access request from the arbitrative apparatus having a lower priority level, such that the access request having the lower priority level obtains an access after all the access requests having a higher priority level have been executed at least once.

23. (Currently amended) [[As an]] The arbiter of claim 22, further comprising:

a priority setting register coupled to the plurality of access request selectors for setting request numbers of access requests having the same ~~that belong to said~~ priority level.

24. (Currently amended) [[As an]] The arbiter of claim 23, further comprising:

an ownership multiplexer[[,]] for finding the corresponding request number of the access request from the priority setting register according to the position [[of]] in said priority queue.

25. (Currently amended) [[As an]] The arbiter of claim 22, wherein said ownership selector further comprises a next ownership selector unit[[,]] for pointing out the position of the next access request when receiving said asking point out signal.

26. (Currently amended) [[As an]] The arbiter of claim 22, further comprising:

an OR gate with multi-inputs coupled to receive outputs of the ~~between the plurality of~~ access request selectors having the lower priority level, ~~and said ownership selector and an output coupled to the ownership selector of one higher priority level, estimating whether there any access request is asked of this priority level, if there is, then arranging the access request into~~ an output of the OR gate being inputted to the priority queue of the ownership selector having the higher ~~one higher~~ priority level.

27. (Currently amended) [[As an]] The arbiter of claim 22, further comprising:

a 2-input AND gate, in which one input is coupled to said ownership selector[[,]] ~~estimating if~~ to estimate whether said asking point out signal is sent, another input is coupled to receive an [[a]] estimation signal[[,]] ~~estimating if~~ to estimate whether the next access request is the last access request of priority queue, and an output is coupled to the ownership selector ~~of one~~ having the lower priority level, wherein when both the inputs are true, the next access request having the [[one]] lower priority level is pointed out ~~point out the next access request~~.